

**REMARKS**

The Examiner is thanked for the indication that claim 44 is allowable.

Claims 44 and 56-70 are pending in the instant application. Claims 27-42 and 52-55 are hereby cancelled without prejudice. Entry of this supplemental amendment and reconsideration of the pending claims are respectfully requested.

*New Claims*

New claims 56 and 63 recite, in pertinent parts,

(3) the set of address temporal codes are each formable within the active material using address pulses each containing one of the set of address temporal codes and incident on the active material along the input path, and

(4) the multiple angularly distinct output directions established using **direction pulses each incident on the active material along one of the multiple angularly distinct output directions.**

Applicants respectfully submit that the Weiner (IEEE Journal of Quantum Electronics, Vol. 28, No. 10, October 1992) fails to disclose, teach, or suggest multiple angularly distinct output paths established using direction pulses along each of the output directions. In fact, FIG. 1 of Weiner fails to disclose use of any direction pulses to establish output directions, much less multiple output directions.

New claim 67 recites, in pertinent part,

programming the active material with the optical interference grating, the optical interference grating providing a spatial-spectral structure corresponding to an interference of an address programming pulse and a direction programming pulse, **the address programming pulse comprising a first temporal address waveform propagating along a first angular direction and the direction programming pulse propagating along a second angular direction different from the first angular direction**

Applicants submit that Weiner fails to disclose, teach, or fairly suggest use of an address programming pulse and a direction programming pulse propagating along different directions to program an active material. Rather, Weiner illustrates in FIG. 1 using a signal beam and a reference beam propagating along identical angular directions (i.e., parallel). Weiner does disclose,

Finally, **although not demonstrated in the current experiment**, we note the possibility of storing multiple matched filters within the same spectral hologram by means of angular multiplexing. In that scenario **different waveforms could**

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be stored by varying the fringe period (in the y direction). This would allow simultaneous correlation of an incoming waveform with multiple stored templates; each correlation would correspond to a different diffracted direction.

*Weiner*, page 2257, left column, lines 4-12 (emphasis added). While *Weiner* discloses varying the fringe period in the y direction, *Weiner* fails to teach or suggest use of a direction programming pulse.

Further, Applicants note that "a reference contains an 'enabling disclosure' if the public was in possession of the claimed invention before the date of invention. 'Such possession is effected if one of ordinary skill in the art could have combined the publication's description of the invention with his [or her] own knowledge to make the claimed invention.'" M.P.E.P. § 2121.01. The above portion of *Weiner* should not be considered an enabling disclosure as it merely discloses an **undemonstrated possibility**. In any event, the above-cited portion of *Weiner* fails to teach or suggest the above recited elements of independent claims 56, 63, and 67.

### CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe all claims remaining in the application are presently in condition for allowance. Accordingly, favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to telephone the undersigned representative if the Examiner believes that an interview might be useful for any reason.

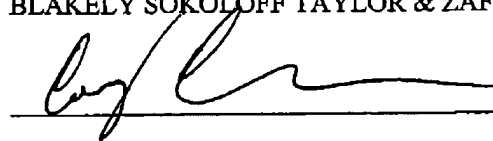
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**CHARGE DEPOSIT ACCOUNT**

It is not believed that extensions of time are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a). Any fees required therefore are hereby authorized to be charged to Deposit Account No. 02-2666. Please credit any overpayment to the same deposit account.

Respectfully submitted,

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Date: March 19, 2004

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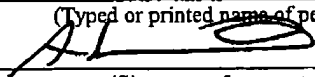
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